

## REMARKS

1. Claims 1-17 were pending in the case and have been rejected. Claim 15 has been cancelled. Claims 14 and 16 have been amended. New claims 18 and 19 have been added. Applicant does not believe that any additional fees are due; however, should there be any additional fees due, please charge Deposit Account No. 11-0245.

2. Amendment. The amendment to Claim 14 is being made to correct an inadvertent mistake that created an impermissible dependency. The amendment merely brings the claim in line with the original intent of the inventor and is not made to avoid any prior art.

The amendment to claim 16 merely rewords the claim so that it is in independent form, incorporating all of the limitation of the cancelled claim 15 from which it depended. The scope of the claim has not been changed.

The addition of claims 18 and 19 does not constitute new matter. The specification clearly discloses this range as a preferred embodiment at page 10 line 8. The claims have not been added as "replacement" claims or to distinguish prior art. They have been added merely to claim a preferred range of the inventor's.

3. 35 U.S.C. §102 Rejection. The Examiner has rejected claim 15 under 35 U.S.C. §103 as being unpatentable over several references. Claim 15 has been cancelled.

4. 35 U.S.C. §103 Rejection. The Examiner has rejected claims 1-17 under 35 U.S.C. §103 as being unpatentable over Fisher (US 2743233), Sheeler (US 2894906), and Kirk-Othmer, Encyclopedia of Chemical Technology, Vol 7, 2<sup>nd</sup> Edition, (1965), pages 297-299.

The Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443,1445, 24 USPQ2d 1443,1444 (Fed. Cir. 1992). The standard for any non-obviousness determination under 35 U.S.C. §103 has been defined by the CAFC in ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 USPQ 929 (Fed. Cir. 1984). As the court stated in Montefiore Hospital, the focus in any §103 analysis is on the differences between the claimed subject matter and the prior art. I respectfully submit that there is insufficient factual evidence to support the Examiner's obviousness rejection as particularly shown by the discussion below.

Three basic criteria must be met to establish a prima facie obviousness rejection. First, there must be a suggestion or motivation to modify the reference or combine the references. Second, there must a reasonable expectation of success. Finally, the references must teach all of the claimed limitations.

“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found

the claimed invention to have been obvious in light of the teachings of the references.” *Ex Parte Clap*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

“When the motivation to combine [or modify] the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper.” *Ex Parte Skinner*, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986).

Applicant respectfully submits that the motivation to modify the teachings of the three cited references is not readily apparent. Further, the examiner has made conclusory statements regarding the size limitations of the crumb rubber particles, rather than presenting a convincing line of reasoning. Specifically, the examiner acknowledges the lack of teaching in the prior art of the size range used by applicant, while stating that, “[t]he variation of the size of the crumb rubber particles in order to obtain improved fluid loss properties of the drilling fluid, would be an obvious variation to one of ordinary skill in the art.” This conclusion is given without further explanation or any citation at all.

Applicant further submits that the examiner has not established that there would have been a reasonable expectation of success in stopping fluid loss by modifying the prior art as applicant has done. As evidence of this, consider the Sheeler patent. In column 4, lines 9-11, Sheeler states that the desirable rubber particles vary in size from 0.25 inches up to a maximum of 0.625 inches across. This was Sheeler’s conclusion, even after “[c]onsiderable research and testing [had] been done,” as he stated in column 3, line 11. Therefore, not only

does Sheeler teach away from the present invention (by limiting his rubber fragments to a minimum of 0.25 inches), but one skilled in the art reading the Sheeler disclosure would have no reason to believe that using smaller particles would work. Sheeler himself is obviously skilled in the art, and even after considerable experimentation, he saw no reason to use smaller particles. In contrast, the present invention uses particles that are a maximum of 2000 microns (which equals 0.08 inches - one third of Sheeler's minimum size).

Sheeler also teaches away from the present invention with his statements at column 4, lines 20-24 and 29-31. Sheeler states that rubber fragments alone are not "especially effective." Rather, rubberized fibers must added, at amounts up to 15% by weight. In contrast, no fibers are used with the present invention because they are not helpful.

Also, the changes made to Sheeler's invention change the principle of operation of the prior art invention. Specifically, Sheeler describes at column 4, lines 20-25 how the particles cohere together with the fibers that are formed into a mat, such that the interstices between the particles are closed. In contrast, the present invention does not use fibers, and does not rely on the formation of a mat. The present invention relies on the cumulative effect of a multitude of particles working individually. Because the principle of operation is radically different, Sheeler cannot be used to make a prima facie case of obviousness. *In re Ratti*, 270, F.2d 810, 123 USPQ 349 (CCPA 1959).

Lastly, the cited art does not teach all of the claimed limitations. Specifically, none of the art cited by the examiner includes the limitation of using particle sizes smaller than 0.25 inches. Therefore, the cited art cannot be combined or modified to make the claimed invention. Of course, such a limitation need not be found in the art if it is merely a "design choice." However, as the Sheeler patent shows, crumb rubber of larger sizes, without the addition of fibers, is ineffective at stopping fluid loss. Therefore, the extremely small sizes used in the present invention is critical. This showing of criticality demonstrates that the size of the particles is not merely a design choice, and it is therefore incumbent upon the examiner to demonstrate the limitation in the art prior to making an obvious rejection.

The Fisher patent predates that of the Sheeler patent. Further, it is far less specific regarding the use of rubber particles to stop fluid loss. And, while the examiner must consider the references as a whole, he must also weigh the persuasiveness of each. *In Re Young*, 927 F.2d 588, 18 USPQ2d 1089. (Fed. Cir. 1991). Applicant submits that, considering the disclosure in Sheeler, Fisher adds nothing to the state of the art. As a result, the strong arguments made herein that Sheeler does not render obvious the claims of the present invention are not rebutted by any disclosure in Fisher. Similarly, the examiner has not cited Kirk-Othmer for any proposition that was not also found in Sheeler. When these references are taken as a whole, one must conclude that those skilled in the art would have no inclination to use rubber particles as small as those of the present invention, nor would

they have any reasonable expectation that such a modification to the known art would be successful.

The foregoing arguments have been drawn to why no prima facie case of obviousness has been made with respect to the broadest claims of the application, i.e. claims 1, 6 and amended 16. Other limitations raised in dependent claims make for an even stronger argument that no prima facie case of obviousness has been established. For instance, the examiner has not mentioned the limitation found in claim 2 (and others) that the crumb rubber be made oil and water wettable. This limitation, as well as its importance, is clearly taught at page 8, line 17 and following. The examiner has not set forth any art which may act to render this limitation obvious.

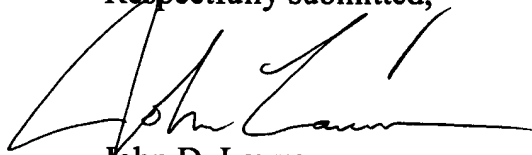
Additionally, while the examiner has stated that the use of fluid additives (as in claims 4, 5, and others) is universally well known in the art, no motivation to combine fluid additives with crumb rubber particles has been pointed out.

Similarly, the examiner has not shown why the limitation of claim 3 (and others), that the crumb rubber be added in quantities from about 1 to about 80 pounds per barrel is obvious. No prior art has been cited. This limitation is critical (not a mere design choice) because of the changes in viscosity caused by the addition, as well as the importance of having a sufficient density of rubber of particles to accomplish the sealing of the strata.

The above discussion shows how the present invention has critical elements not found in the cited reference. For this reason Applicant requests that the obvious rejection be withdrawn.

5. Based on the above remarks Applicant believes that all of the claims in the case are allowable and an early Notice of Allowance is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John D. Lauve", written over the typed name.

John D. Lauve

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

14.(amended) The method of claim 11 [9] wherein said drilling [well working] fluid is a water base well working fluid containing a fluid loss additive.

16.(amended) A [The] composition of well working fluids [of claim 15 wherein said]comprising ground elastomeric crumb rubber particles [range]ranging in size from about 0.5 microns to about 425 microns.